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10/789,402	02/27/2004	Hormuzd M. Khosravi	Intel-022PUS	5239

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EXAMINER

WEIDNER, TIMOTHY J

ART UNIT	PAPER NUMBER
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2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/789,402

Applicant(s)

KHOSRAVI, HORMUZD M.

Examiner

Timothy Weidner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

Summary of the Invention is not present.

The number "100a" is not in the drawings, and should be "110a" which error can be found in at least page 6 line 30, page 7 line 6, and page 9 line 1.

The example packet header on page 7 is a figure, which should be removed from the Detailed Description, and placed as part of the Drawings if desired.

Appropriate correction is required.

Claim Objections

Claims 11-20 are objected to because of the following informalities: "executing instructions machine result in" is not clear. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The storage medium of claims 21-30 appears directed to a signal (page 13, lines 27-29), which is a form of energy not falling into one of the four statutory categories of invention, i.e. it is not a process, machine, manufacture, or composition of matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-8, 11, 13-18, 21, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelissier et al. (US 6,496,503 B1, herein Pelissier) in view of Yip et al. (US 7,245,629 B1, herein "Yip").

Regarding claims 1, 11, and 21, Pelissier teaches a network element module comprising: a control element (figure 1, item 150; CE); a plurality of forwarding elements (figure 1, items 110, 112; FEs); and an interconnect in communication with said CE and said plurality of FEs (figure 1, item 122) and wherein communication across said interconnect between the CE and the FE is accomplished by executing machine instructions resulting in the following: executing a binding phase to provide a data channel between the CE and a first one of the FEs (column 2, lines 57-67, column 3, lines 1-15; "configured or initialized, subsequent cells can be routed"), the data channel

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to transport packets including, as in the instant invention alternative, packets to be forwarded from the CE to a second one of the FEs (column 4, lines 30-37), the binding phase further to provide a control channel between the CE and the first one of the FEs (column 2, lines 57-67, column 3, lines 1-15; "route management cells"), the control channel to transport control and configuration messages (column 5, lines 34-41); executing a capability discovery phase between the CE and the first one of the FEs (column 4, lines 23-30); and executing a configuration operation phase between the CE and the first one of the FEs (column 4, lines 23-30). However, Pelissier does not teach said control channel is separate from said data channel.

Yip, which is in the same field of endeavor, teaches the control channel is separate from the data channel (figure 1, items 132, 134; column 2, lines 25-35) for the purpose of making a packet-forwarding device less susceptible to a single point of failure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the data and control channels of Pelissier separate to make a packet-forwarding device less susceptible to a single point of failure.

Regarding claims 3, 13, and 23, Pelissier teaches said binding phase further comprises a bind request (column 9, lines 34-50; "query ... initialize") sent from the first one of the FEs to the CE (column 4, lines 30-37).

Regarding claims 4, 14, and 24, Pelissier teaches said binding phase further comprises a bind response sent from the CE to the first one of the FEs after the first one of the FEs has received said bind request (column 9, lines 59-66).

Regarding claims 5, 15, and 25, Pelissier teaches said capability discovery phase comprises, as in the instant invention alternative, a topology request sent from the CE to the first one of the FEs (column 9, lines 34-50; "query a device's forwarding database").

Regarding claims 6, 16, and 26, Pelissier teaches said capability discovery phase further comprises, as in the instant invention alternative, a topology response sent from the first one of the FEs to the CE after the first one of the FEs has received said topology request (column 9, lines 59-66).

Regarding claims 7, 17, and 27, Pelissier teaches said configuration operation phase comprises, as in the instant invention alternative, a query request sent from the CE to the first one of the FEs (column 9, lines 34-50; "query a device's address").

Regarding claims 8, 18, and 28, Pelissier teaches said configuration operation phase further comprises, as in the instant invention alternative, a query response sent from the first one of the FEs to the CE after the first one of the FEs has received said query request (column 9, lines 59-66).

Claims 2, 12, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelissier et al. (US 6,496,503 B1, herein Pelissier) in view of Yip et al. (US 7,245,629 B1, herein "Yip") as applied to claims 1, 11, and 21 respectively above, and further in view of Sugihara (US 6,785,272 B1).

Regarding claims 2, 12, and 22, Sugihara, which is in the same field of endeavor, teaches executing an unbinding phase between the CE and the first one of the FEs (figure 9, steps 1009, 1010; column 12, lines 1-15; "the master unit can assume that the

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corresponding slave unit is no longer connected”) for the purpose of initiating a topology table update. It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the method taught by Pelissier and Yip, execute an unbinding phase between the CE and the first one of the FEs to initiate a topology table update.

Claims 9, 10, 19, 20, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelissier et al. (US 6,496,503 B1, herein Pelissier) in view of Yip et al. (US 7,245,629 B1, herein “Yip”) as applied to claims 1, 1, 11, 11, 21, and 21 respectively above, and further in view of Ben-Yehezkel et al. (US 2002/0165973 A1, herein “Ben-Yehezkel”).

Regarding claims 9, 19, and 29, Ben-Yehezkel, which is in the same field of endeavor, teaches messages are provided having an eight-byte header (paragraph 0079) for the purpose of providing a maximum number of bytes of payload in a UDP datagram. It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the method taught by Pelissier and Yip, provide the messages having an eight-byte header to provide a maximum number of bytes of payload in a UDP datagram.

Regarding claims 10, 20, and 30, Ben-Yehezkel teaches messages are provided having a variable length payload (paragraph 0088) for the purpose of adhering to the characteristics of the channel or the maximum size packet that will be accepted at the packet’s destination. It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the method taught by Pelissier and Yip,

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provide the messages having a variable length payload to adhere to the characteristics of the channel or the maximum size packet that will be accepted at the packet's destination.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tang et al. (US 2003/0185226 A1) discloses updating routing and forwarding information with separate control and forwarding planes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Weidner whose telephone number is (571) 270-1825. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJW



KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER